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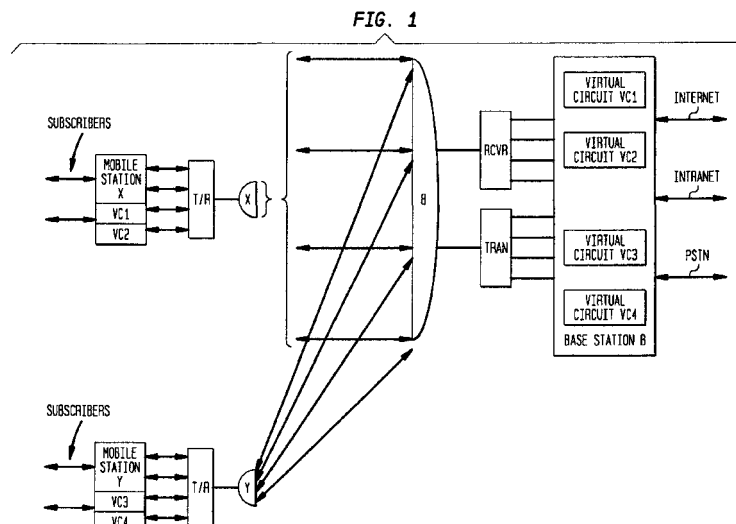
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(54) **Adaptive frequency channel assignment based on battery power level in wireless access protocols**

(57) A method and system adapt scheduling priorities in a wireless communications system to conserve battery power in mobile stations operating within the system. A base station, within the system, receives battery power level information and other setup information from mobile stations operating within the service area of the base station during call setup procedures. Based

on the battery power level information and other setup information, the base station assigns frequency channels to the mobile stations so that those mobile stations having battery power levels below a threshold value are assigned frequency channels that have lower interference levels than frequency channels assigned to other mobile stations. The frequency channel assignments are transmitted to the mobile stations.





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EUROPEAN SEARCH REPORT

Application Number
EP 98 30 8466

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	WO 95 09512 A (NOKIA TELECOMMUNICATIONS OY ;UOLA RISTO (FI)) 6 April 1995 (1995-04-06) * page 8, line 22 - page 11, line 7 *	1,2,6-8, 12,13, 17-19	H04Q7/38 H04Q7/30 H04Q7/32 H04Q7/22
Y	US 5 666 649 A (DENT PAUL W) 9 September 1997 (1997-09-09) * column 3, line 1 - column 5, line 12 *	1,2,6-8, 12,13, 17-19	
A	US 5 428 815 A (GRUBE GARY W) 27 June 1995 (1995-06-27)		
E	US 6 072 784 A (CHEN JYH-CHENG ET AL) 6 June 2000 (2000-06-06) * column 3, line 21 - column 4, line 14 * * column 13, line 36 - column 14, line 47 *	1,3-6, 8-17, 19-22	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H04Q
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 August 2000	Examiner López-Pérez, M-C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03/82 (P04C01)



European Patent
Office

Application Number
EP 98 30 8466

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 98 30 8466

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claim : 1 2 6 7 8 12 13 17 18 19

In a mobile telecommunications system, the MSs inform the BSs about their battery power level, and depending on this, a frequency channel with a higher or lower interference is assigned.

2. Claim : 3 4 5 9 10 11 14 15 16 20 21 22

In a mobile telecommunications system, the MSs inform the BSs about their battery power level, and according to this battery power level, the transmission of messages from the stations is scheduled, so MSs with lower battery power get priority in the sending and in the delivery of messages.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 30 8466

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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25-08-2000

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